

### REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

After entry of the foregoing Amendment, Claims 7, 8, 10, 11, 13, 14, 16, 17, 19, 20, 28, 29, 31, 32, 34, 35, 37, 38, 40, 41 and 50 are pending in the present Application. Claims 7, 8, 28 and 29 are amended, non-cosmetic changes find support at least at Figs. 13A-C of the specification. No new matter has been added.

By way of summary, the Official Action of April 10, 2007 presents the following issues: Claims 7, 8, 10, 11, 13, 14, 16, 17, 19, 20, 28, 29, 31, 32, 34, 35, 37, 38, 40, 41 and 50 stand rejected under 35 U.S.C. § 102 as being anticipated by Sakoda et al. (U.S. Patent No. 6,563,881, hereinafter Sakoda); and, Claim 50 stands rejected under 35 U.S.C. § 103 as being unpatentable over Sakoda.<sup>1</sup>

### REJECTION UNDER 35 U.S.C. § 102

The outstanding Official Action has rejected Claims 7, 8, 10, 11, 13, 14, 16, 17, 19, 20, 28, 29, 31, 32, 34, 35, 37, 38, 40, 41 and 50 under 35 U.S.C. § 102 as being anticipated by Sakoda. The Official Action contends that Sakoda describes all of the Applicants' claimed features. Applicants respectfully traverse the rejection.

Sakoda describes a radio telephone system for transmitting data at rates of 32 kbps, 64 kbps, 96 kbps, and 128 kbps. As shown in Fig. 6, communication is conducted in each of these set channels using a multi-carrier signal having transmission symbols distributed among a plurality of sub-carriers. The transmission symbols of each channel of the plurality of set channels are arranged at intervals of  $N^{\text{th}}$  power of 2, where N is an arbitrary positive number, with respect to a reference frequency interval.<sup>2</sup> To this end, a coding unit (102) is provided for coding an information bit stream with a predetermined coding rate. Each bit coded by the

<sup>1</sup> As these claims are cancelled, this rejection is rendered moot.

<sup>2</sup> Sakoda at column 9, lines 10-26; Fig. 6

coding unit is supplied to a symbol mapping unit (103) and mapped to transmission symbols therein. The transmission symbols generated by the mapping unit are supplied to a null symbol insertion unit. The null symbol insertion unit performs processing to make the symbol rate equal to the maximum transmission rate constantly irrespective of the transmission rate of the original information bit stream by regularly inserting symbols having amplitude of zero depending on the transmission rate obtained at the time.<sup>3</sup>

Conversely, in an exemplary embodiment of the Applicants' advancements as recited in Claim 7, a transmission rate of information is changed by controlling the amount of multiplex transmission intervals between a first transmission and a subsequent transmission, along a time axis for each user to which the information is to be transmitted. Thus, as noted in the Applicant's specification at page 25, an advantage of this claim feature is that when the transmission rate is to be increased, intervals of the data transmissions (intervals between each adjacent data transmission) are shortened. In this way, the information transmission rate is controlled by controlling the intervals of data transmission.

As Claim 28 recites substantially similar limitations to that discussed above, Applicants respectfully submit that this claim and any corresponding dependent claims are likewise distinguished over the cited reference.

Further, Claim 8 recites, *inter alia*, a multi-carrier CDMA a radio transmission method, including:

... enabling a transmission rate of the information to be changed by controlling the number of modulation levels used for each user when the information symbols to be spread are obtained through data modulation. (emphasis added)

As noted above, in an exemplary embodiment of the Applicant's claimed advancement recited in Claim 8, a transmission rate information is changed by controlling the number of modulation levels used for each user when the information symbols to be spread are obtained

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<sup>3</sup> Sakoda at column 9, lines 41-49.

through data modulation. Thus, as noted in the Applicant's specification at page 26, an advantage of this claim feature is that when the transmission rate is increased, the number of modulation levels may be increased. For example, by modulating the transmitted data by 16 QAM (the number of modulation levels: 16) or 64 QAM (the number of modulation levels: 64). Sakoda merely describes the different modulation schemes may be utilized for transmitting data. There is no description of changing the number of modulation levels for each user as recited in the amended claims. Likewise, as independent Claim 29 recites the substantially similar limitations to that discussed above, this claim and any corresponding dependent claims are also distinguishable over the cited reference.

Accordingly, Applicants respectfully request that the rejection of Claims 7, 8, 10, 11, 13, 14, 16, 17, 19, 20, 28, 29, 31, 32, 34, 35, 37, 38, 40 and 41 under 35 U.S.C. § 102 be withdrawn.

#### REJECTION UNDER 35 U.S.C. § 103

The Official Action has rejected Claim 50 under 35 U.S.C. § 103 as being unpatentable over Sakoda. The Official Action contends that Sakoda describes, or renders obvious, all of the features of the Applicants' claim. Applicants respectfully traverse the rejection.

As noted above, Sakoda does not describe all of the features of the Applicants' amended claims for which it has been asserted. As such, Applicants respectfully submit that a *prima facie* case of obviousness has not been presented.

Accordingly, Applicants respectfully request that the rejection of Claim 50 under 35 U.S.C. § 103 be withdrawn.

CONCLUSION

Consequently, in view of the foregoing amendment and remarks, it is respectfully submitted that the present Application, including Claims 7, 8, 10, 11, 13, 14, 16, 17, 19, 20, 28, 29, 31, 32, 34, 35, 37, 38, 40, 41 and 50, is patently distinguished over the prior art, in condition for allowance, and such action is respectfully requested at an early date.

Respectfully submitted,

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